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(BENJAMIN BANNEKER)

THE NEGRO MATHEMATICIAN AND ASTRONOMER

BY

HENRY E. (BAKER)

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BENJAMIN BANNEKER, THE NEGRO MATHE- MATICIAN AND ASTRONOMER

The city of Washington very recently celebrated the 125th anniversary of the completion of the survey and laying out of the Federal Territory constituting the District of Columbia. This was executed under the supervision of the famous French civil engineer, Major Pierre Charles L'Enfant, as the head of a commission appointed by George Washington, then president of the United States. Serving as one of the commissioners, sitting in conference with them and performing an important part in the mathematical calculations involved in the survey, was the Negro mathematician and astronomer, Benjamin Banneker. As there did not appear to be during this celebration any disposition to give proper recognition to the scientific work done by Banneker, the writer has thought it opportune to present in this form a brief review of Banneker's life so as to revive an interest in him and point out some of this useful man's important achievements.

On a previous occasion the writer undertook to collect some data with the same object in view, and at that time he addressed a letter to the postmaster at Ellicott City, Maryland, asking to be put in touch with some one of the Ellicott family, who might furnish reliable data on the subject. In this way, correspondence was established with the family of Mrs. Martha Ellicott Tyson, of Baltimore. One of

her descendants, Mrs. Tyson Manly, kindly came over from Baltimore, and, calling on the writer at the United States Patent Office, presented him with a copy of the life of Banneker, published in Philadelphia in 1884, and compiled from the papers of Martha Ellicott Tyson, who was the daughter of George Ellicott, a member of the noted Maryland family, who established the business that developed the town of Ellicott City.

Between George Ellicott and Benjamin Banneker, Mrs. Tyson says, there existed "a special sympathy,"¹ and she further refers to her father as "the warmest friend of that extraordinary man."² Her father had many of Banneker's manuscripts, from which he intended to compile a biography of his friend, but his unusually busy commercial life afforded him no leisure in which to carry out this much cherished plan. Mrs. Tyson's account, therefore, can be relied upon as coming directly from those who, personally knowing Banneker, and living in the same community in frequent contact with him, had preserved accurate data from which to publish the true record of his life.

On a farm located near the Patapsco River, within about ten miles of the city of Baltimore, in the State of Maryland, on the 9th day of November, 1731, Benjamin Banneker was born. Various accounts are given of his ancestry. One of his biographers states that "there was not a drop of white blood in his veins,"¹ another asserts with positiveness that his parents and grandparents were all native Africans.³ In still another sketch of Banneker's life, read before the Maryland Historical Society, on May 1, 1845, it is stated that "Banneker's mother was the child of *natives* of Africa so that to no admixture of the blood of the white man was he indebted for his peculiar and extraordinary abilities."⁴ Thomas Jefferson said that Banneker was the

¹ *The Leisure Hour*, 1853, II, p. 54.

² Tyson, *Banneker, The Afric-American Astronomer*, p. 10.

³ *The Atlantic Monthly*, XI, p. 80.

⁴ In another particular this same sketch differs from several others, namely, in locating young Banneker at "an obscure and distant country school" with no mention of the oft-repeated assertion that the school was one attended

“son of a black man born in Africa and a black woman born in the United States.”⁵

According to Mrs. Tyson's account Banneker's mother and father were Negroes, but his maternal grandmother was a white woman of English birth, who had been legally married to a native African. The antecedent circumstances of this marriage were so unusual as to justify special mention. Mollie Welsh was an English woman of the servant class, employed on a cattle farm in England where a part of her daily duty was the milking of the cows. She was one day charged with having stolen a pail of milk that had, in fact, been kicked over by a cow. The charge seems to have been taken as proved, and in lieu of a severer punishment she was sentenced to be shipped to America. Being unable to pay for her passage she was sold, on her arrival in America, to a tobacco planter on the Patapsco River to serve a term of seven years to pay the cost of her passage from England. At the end of her period of service, this Mollie Welsh, who is described as “a person of exceedingly fair complexion and moderate mental powers,” was able to buy a portion of the farm on which she had worked.⁶ In 1692,

by both white and colored children. The author of the last-mentioned sketch was evidently not sure of these two statements, and therefore did not include them. In fact, he appears not to have been quite sure of the propriety of submitting any sketch at all of this “free man of color” to the distinguished body constituting the Maryland Historical Society, for there was a clear note of apology in his opening declaration that “A few words may be necessary to explain why a memoir of a free man of color, formerly a resident of Maryland, is deemed of sufficient interest to be presented to the Historical Society.” But he justified his effort on the ground that “no questions relating to our country (are) of more interest than those connected with her colored population”; that that interest had “acquired an absorbing character”; that the presence of the colored population in States where slavery existed “modified their institutions in important particulars,” and effected “in a greater or less degree the character of the dominant race”; and “for this reason alone,” he said, “the memoir of a colored man, who had distinguished himself in an abstruse science, by birth a Marylander, claims consideration from those who have associated to collect and preserve facts and records relating to the men and deeds of the past.”—J. H. B. Latrobe in *Maryland Historical Society Publications*, I, p. 8.

⁵ Ford edition of *Jefferson's Writings*, V, p. 379.

⁶ In the memoir of Banneker, above mentioned, read before the Maryland

she purchased two African slaves from a ship in the Chesapeake Bay near Annapolis. One of these slaves named Ban-naky, subsequently Anglicized as Banneker, was the son of an African king, and was stolen by slave dealers on the coast of Africa.⁷ With these two slaves as her assistants, Mollie Welsh industriously cultivated her farm for a number of years with such gratifying success that she felt impelled afterwards to release her two slaves from bondage. The slave Banneker had gained such favor in the eyes of his owner that she married him directly after releasing him from bondage, notwithstanding the fact that his record for sustained industry had not equalled that of his fellow slave, while serving their owner on her farm—a fact that was perhaps due to Banneker's natural inclination to indulge his royal prerogatives. This Banneker is described as "a man of much intelligence and fine temper, with a very agreeable presence, dignified manner and contemplative habits."⁸

There were born of this marriage four children of whom the eldest daughter, Mary, married a native African who had been purchased from a slave ship by another planter in her neighborhood. This slave was of a devout nature, and early became a member of the Church of England, receiving at his baptism the name of Robert. After baptism, Robert's master set him free. It was, therefore, as a free man that he became the husband of Mary Banneker, whose surname he adopted for his own. Four children were born to Robert and Mary Banneker, one boy and three girls, the eldest being Benjamin, the subject of this sketch.

Robert Banneker had evidently formed some of the habits of thrift evinced by his mother-in-law, Mollie Welsh, for it is on record that in 1737 within a few years after receiving his freedom he purchased a farm of 120 acres from

Historical Society in 1845, and in another memoir of Banneker, read before the same Society by Mr. J. Saurin Norris, in 1854, the estate purchased by Mollie Welsh is referred to as "a small farm near the present site of Baltimore," and "purchased at a merely nominal price." See Norris's *Memoir*, p. 3.

⁷ Norris's *Memoir*, p. 4; Williams's *History of the Negro Race*, p. 386.

⁸ Tyson, *Banneker*, p. 10.

Richard Gist, paying for it 17,000⁹ pounds of tobacco, which in those days served as a legal medium of exchange. This farm, located on the Patapsco River, within about ten miles of the town of Baltimore, thus became the Banneker homestead. Here it was that young Benjamin spent his early years and grew to manhood, assisting his father with the general work of the farm.

Banneker very early showed signs of precocity, which made him the special favorite of his maternal grandmother who took delight in teaching him to the extent of her own limited mental endowment. She taught him to study the Bible, and had him read it to her at regular intervals for the purpose of training him along religious lines of thought. He attended a small school in his neighborhood where a few white and colored children were taught by the same white schoolmaster. Until the cotton gin and other mechanical appliances made Negroes too valuable as tools of exploitation to be allowed anything so dangerous as education, there were to be found here and there in the South pioneer educators at the feet of whom even Negroes might sit and learn.¹⁰

As a boy at school young Banneker is said to have spent very little, if any, of his time in the games and frolics that constitute so large a part of the school life of the average youth. He was unusually fond of study, devoting by far the larger part of his time to reading, so that it was said of him that "all his delight was to dive into his books." His reading, however, did not take a wide range. His limited resources did not permit him to purchase the many works he desired. What Banneker lost through the lack of a variety of books, however, he tried to make up for in being a close observer of everything around him. He turned everything that he could into a channel of information and drew upon all possible sources to keep himself posted on the general activities of his community and beyond. In this way, "he

⁹ It is elsewhere given as 7,000, but the earlier record seems to be the correct one.

¹⁰ *Atlantic Monthly*, XI, p. 81.

became gradually possessed of a fund of general knowledge which it was difficult to find even among those who were far more favored by opportunity than he was."¹¹

Although Banneker had by this time begun to ingratiate himself into the favor of the very best element in his community solely through his demonstration of mental superiority, he did not permit his unusual popularity and his love of study to render him any less helpful to his father in the cultivation of the farm. He proved himself to be just as industrious in farming as he was diligent in studying. When his father died in 1759, leaving to Benjamin and his mother, as joint heirs, the dwelling in which they lived, together with 72 acres of land,¹² Benjamin was fully prepared to assume control of affairs on the estate, and make it yield a comfortable living for him and his mother. His father had divided the remaining 28 acres of the original farm among the three daughters who also survived him. His farm was said to be one of the best kept farms in his neighborhood. It was well stocked, containing a select assortment of fruit trees, a fine lot of cattle, and a specially successful apiary.

Young Banneker's diligent reading of the books at his command served to develop his mental powers rapidly, giving him a retentive memory, correct forms of speech and a keen power of analysis. This faculty grew largely out of his special fondness for the study of mathematics, by which he acquired unusual facility in solving difficult problems. He early won the reputation of being the smartest mathematician not only in his immediate neighborhood but for miles around. He was often seen in the midst of a group of neighbors whom he constantly astounded by the rapidity and accuracy with which he would solve the mathematical puzzles put to him. This caused such widespread comment that he frequently received from scholars in different parts of the country, desiring to test his capacity, mathematical

¹¹ Latrobe, *Memoir*, *Maryland Historical Society Publications*, I, p. 7.

¹² *Ibid.*, I, p. 7.

questions, to all of which, it is said, he responded promptly and correctly.¹³

His close attention to the study of mathematics led him easily into the quest of some practical form by which to give tangible expression to his thought. It is highly probable that this fact can explain the facility with which he planned and completed at the age of thirty a clock which stands as one of the wonders of his day.¹⁴ "It is probable," says one, "that this was the first clock of which every portion was made in America; it is certain that it was as purely his own invention as if none had ever been before. He had

¹³ Banneker would frequently, in answering questions submitted to him, accompany the answers with questions of his own in rhyme. The following is an example of such a question submitted by him to another noted mathematician, his friend and neighbor, Mr. George Ellicott:

A cooper and Vintner sat down for a talk,
Both being so groggy, that neither could walk,
Says Cooper to Vintner, "I'm the first of my trade,
There's no kind of vessel, but what I have made,
And of any shape, Sir,—just what you will,—
And of any size, Sir,—from a ton to a gill!"
"Then," says the Vintner, "you're the man for me,—
Make me a vessel, if we can agree.
The top and the bottom diameter define,
To bear that proportion as fifteen to nine,
Thirty-five inches are just what I crave,
No more and no less, in the depth, will I have;
Just thirty-nine gallons this vessel must hold,—
Then I will reward you with silver or gold,—
Give me your promise, my honest old friend?"
"I'll make it tomorrow, that you may depend!"
So the next day the Cooper his work to discharge,
Soon made the new vessel, but made it too large;—
He took out some staves, which made it too small,
And then cursed the vessel, the Vintner and all.
He beat on his breast, "By the Powers!"—he swore,
He never would work at his trade any more.
Now my worthy friend, find out, if you can,
The vessel's dimensions and comfort the man!

BENJAMIN BANNEKER.

We are indebted to Benjamin Hallowell, of Alexandria, for the solution of this problem. The greater diameter of Banneker's tub must be 24.745 inches; the less diameter 14.8476 inches. See *Maryland Historical Society Publications*, I, p. 20.

¹⁴ *The Atlantic Monthly*, XI, p. 81.

seen a watch, but never a clock, such an article not being within fifty miles of him."¹⁵ He completed this clock with no other tools than a pocket knife, and using only wood as his material. It stood as a perfect piece of machinery, and struck the hours with faultless precision for a period of 20 years.

The successful completion of this clock attracted to Banneker the attention of his entire community, serving as the starting point of a more brilliant career. It was this display of mechanical genius which engaged the attention of the Ellicotts, who had lately moved into his neighborhood from Pennsylvania. They had already heard of the unusual accomplishments of this gifted Negro and lost no time in getting in touch with him, especially since one of the Ellicotts was himself a mathematician and astronomer of marked ability.¹⁶

The meeting with the Ellicotts was of signal advantage to Banneker, and ultimately proved the turning point in his career. They were of Quaker origin and had gone down to Maryland in 1772 in search of a desirable location for the establishment of flour mills. They were evidently persons of foresight. Being progressive, open-minded and comparatively free from the prejudices that were then mostly native to the section into which they had moved, they cordially received Banneker and frankly proclaimed his talents.¹⁷ They did not seem to permit the differences of race to erect a single barrier between Banneker and themselves in the ordinary run of their frequent business intercourse. When the Ellicotts were erecting their mills, the foundation of Ellicott City, they purchased from Banneker's farm a large portion of the provisions needed for the workmen. His mother, Mary Banneker, attended to the marketing, bringing poultry, vegetables, fruit and honey to the Ellicott workmen.¹⁸

¹⁵ *The Atlantic Monthly*, XI, p. 81.

¹⁶ *Atlantic Monthly*, XI, p. 82.

¹⁷ *Southern Literary Messenger*, XXIII, p. 65.

¹⁸ Tyson's *Banneker*, p. 24.

Banneker's mechanical inclination led him to take unusual interest in the building of the Ellicott Mills, and to make frequent visits there to watch the operation of the machinery. In the course of time a store was built near the mills, and it became the meeting place of nearly all the wide-awake and worth while people in the community, who would linger together to talk of the news of the day. This was the ordinary means of news exchanging in those days when there were no dailies nor bulletins nor hourly extras. Banneker was always a welcome participant in these gatherings although he was a man of modest demeanor, never injecting himself into the conversation in an unseemly manner. When, however, he permitted himself to be drawn into discussions, he always expressed his views with such clearness and intelligence that he won the respect of his hearers.¹⁹

The friendship between George Ellicott and Banneker grew stronger as the years went by, and their common interests in mathematics and natural science led to a fellowship which often brought them together. This interest led George Ellicott to lend Banneker a number of mathematical books and instruments. Among these books were Mayer's *Tables*, Ferguson's *Astronomy* and Leadbetter's *Lunar Tables*. When these books and instruments were handed to Banneker it was Ellicott's intention to remain there a while to give Banneker some personal instruction in the use of them, but he was prevented by lack of time from carrying out this intention. On calling again on Banneker shortly afterward, to offer him this instruction, Ellicott was surprised to find that Banneker had already discovered for himself the key to the use of both and was "already absorbed in the contemplation of the new world which was thus opened to his view."²⁰ They had literally made him fix his gaze on the stars, for the study of astronomy thus became his one absorbing passion.

¹⁹ Tyson, *Banneker*, p. 26.

²⁰ J. H. B. Latrobe's *Memoir*, *Maryland Historical Society Publications*, I, p. 8.

He had now nearly covered his three score years, and it was no little tribute to his mental vigor that he should have determined at that age to master so abstruse a science as astronomy. But by degrees he gave himself up to its study with unusual zeal. His favorite method of studying this science was to lie out on the ground at night, gazing up at the heavens till the early hours of the morning. He then tried to restore his tired mind and body by sleeping nearly all the next day. This habit nearly caused him to fall into disrepute among his neighbors, who, ignorant of his plans, accused him of becoming lazy in his old days.

In 1789 he had advanced so far with his plan as to project a solar eclipse, the calculation of which he submitted to his friend George Ellicott. In the study of these books Banneker detected several errors of calculation, and, writing to his friend Ellicott, he made mention of two of them. On one occasion he wrote:

"It appears to me that the wisest men may at times be in error; for instance, Dr. Ferguson informs us that, when the sun is within 12° of either node at the time of full, the moon will be eclipsed; but I find that, according to his method of projecting a lunar eclipse, there will be none by the above elements, and yet the sun is within $11^{\circ} 46' 11''$ of the moon's ascending node. But the moon, being in her apogee; prevents the appearance of this eclipse."

And again he wrote Ellicott:

"Errors that ought to be corrected in my astronomical tables are these: 2d vol. Leadbetter, p. 204, when anomaly is $4^{\circ} 30'$ the equation $3^{\circ} 30' 4''$ ought to have been $3^{\circ} 28' 41''$. In ♂ equation, p. 155, the logarithm of his distance from \odot ought to have been 6 in the second place from the index, instead of 7, that is, from the time that its anomaly is $3^{\circ} 24'$ until it is $4^{\circ} 0'$."

Acting upon the suggestion of one of his educated friends, Banneker now undertook to extend his calculations so as to make an Almanac, then the most comprehensive medium of scientific information. Banneker continued the work required to complete his almanac, and finished the

first one to cover the year 1792, when he was sixty-one years old. This attracted to him a number of prominent men, among whom was Mr. James McHenry, of Baltimore, a member of John Adams's cabinet. This gentleman, through his high regard for Banneker's achievements, had his almanac published by the firm of Goddard and Angell of Baltimore. In his letter to this firm McHenry paid a fine tribute to the character of the author, although some of his statements as to Banneker's parentage do not harmonize with what appears to the writer as more reliable information from another source. McHenry laid special stress upon the fact that Banneker's work, in the preparation of his almanac, "was begun and finished without the least information or assistance from any person, or from any other books," than those he had obtained from Mr. Ellicott, "so that whatever merit is attached to his present performance is exclusively and peculiarly his own."²¹

That Mr. McHenry attached a wider significance to Banneker's attainments than is implied in a merely personal achievement is shown in his statement that he considered "this negro as a fresh proof that the powers of the mind are disconnected with the color of the skin, or, in other words, a striking contradiction to Mr. Hume's doctrine, that the negroes are naturally inferior to the whites, and unsusceptible of attainments in arts and sciences?" "In every civilized country," said he, "we shall find thousands of whites, liberally educated and who have enjoyed greater opportunities for instruction than this negro, (who are) his inferiors in those intellectual acquirements and capacities that form the most characteristic features in the human race."²² But the system that would assign to these degraded blacks *an origin different from the whites*, if it is not ready to be deserted by philosophers, must be relinquished as similar instances multiply; and that such must frequently happen, cannot be doubted, *should no check impede the progress of*

²¹ *Atlantic Monthly*, XI, p. 82.

²² Tyson, *Banneker*, p. 51.

humanity, which, ameliorating the conditions of slavery, necessarily leads to its final extinction."²³

Referring to their attitude, the publishers said in their editorial notice that "they felt gratified in the opportunity of presenting to the public, through their press, an accurate Ephemeris for the year 1792, calculated by a sable descendant of Africa." They flatter themselves "that a philanthropic public, in this enlightened era, will be induced to give their patronage and support to this work, not only on account of its intrinsic merit (it having met the approbation of several of the most distinguished astronomers of America, particularly the celebrated Mr. Rittenhouse), but from similar motives to those which induced the editors to give this calculation the preference, the ardent desire of *drawing modest merit from obscurity* and controverting the long established illiberal prejudice against the blacks."²⁴

Banneker had himself not lost sight of the probable effect of his work in reshaping to some extent the public estimate concerning the intellectual capacity of his race. And this was the thought that prompted him to send a manuscript copy of his first almanac to Thomas Jefferson, then Secretary of State in Washington's cabinet. In his letter to Jefferson, dated August 19, 1791, Banneker made, with characteristic modesty, a polite apology for the "liberty" he took in addressing one of such "distinguished and dignified station," and then proceeded to make a strong appeal for the exercise of a more liberal attitude towards his down-trodden race, using his own achievements as a proof that the "train of absurd and false ideas and opinions which so generally prevails with respect to the Negro should now be eradicated."²⁵

²³ Mr. McHenry was not only one of the most prominent men of Baltimore, but was several times honored with positions of trust. He was Senator from Maryland in 1781; and as one of the Commissioners to frame the Constitution of the United States, he signed that instrument in 1787. He was also a member of the cabinet of President John Adams as Secretary of War in 1797.—Tyson, *Banneker*, pp. 50, 51, 52.

²⁴ *Maryland Historical Society Publications*, I, 1844-48, I, p. 79.

²⁵ A copy of Banneker's letter to Thomas Jefferson and the statesman's reply were published in the *JOURNAL OF NEGRO HISTORY*, III, p. 69.

Thomas Jefferson took note of the moral courage and the loyalty to race evident throughout the whole of Banneker's remarkable letter and he honored it with the most courteous reply, under date of August 30, 1791. After thanking Banneker for the letter and the almanac accompanying it, Jefferson expressed the pleasure it afforded him to see such proofs "that nature has given to our black brethren talents equal to those of the other colors of men, and that the appearance of a want of them is owing only to the degraded condition of their existence both in Africa and America." He also added that he desired "ardently to see a good system commenced for raising the condition both of their body and mind to what it ought to be." The copy sent to Jefferson was formally transmitted to M. de Condorcet, secretary of the Academy of Sciences at Paris, and member of the Philanthropic Society because, as he said, he "considered it a document to which your whole race had a right for its justification against the doubts which have been entertained of them." This recognition of Banneker's merit very naturally added greatly to his rapidly growing reputation at home, and brought to him hundreds of letters of congratulation from scholarly men throughout the civilized world.

The most distinguished honor that came to him from his own countrymen was the invitation to serve with the commission appointed by President Washington to define the boundary line and lay out the streets of the Federal Territory, later called the District of Columbia. This commission, was appointed by Washington, in 1790, and was composed of David Stuart, Daniel Carroll, Thomas Johnson, Andrew Ellicott and Major Pierre Charles L'Enfant, a famous French engineer. This personnel was given in the article on Benjamin Banneker by John R. Slattery in the *Catholic World* in 1883,²⁷ but in the *Washington Evening Star* of October 15, 1916, reporting an address by Fred Woodward, the commission was said to consist of "Major L'Enfant, Andrew Ellicott, Count de Graff, Isaac Roberdeau, William

²⁷ *Catholic World*, XXXVIII, December, 1883.

King, Nicholas King, and Benjamin Banneker, a free Negro."²⁸ It is on record that it was at the suggestion of his friend, Major Andrew Ellicott, who so thoroughly appreciated the value of his scientific attainments, that Thomas Jefferson nominated Banneker and Washington appointed him a member of the commission. In the *Georgetown Weekly Ledger*, of March 12, 1791, reference is made to the arrival at that port of Ellicott and L'Enfant, who were accompanied by "Benjamin Banneker, an Ethiopian whose abilities as surveyor and astronomer already prove that Mr. Jefferson's concluding that that race of men were void of mental endowment was without foundation."²⁹

Speaking afterwards of his work with this commission, Banneker referred to the unfailing kindness and courtesy of the distinguished company in which he found himself. One of his biographers says that the deportment of the mathematician during this engagement was such as to secure for him the respect and admiration of the commissioners. His striking superiority over all other men of his race whom they had met led them to disregard all prejudices of caste.³⁰ During the stay of the commissioners at their official quarters, Banneker was invited, of course, to eat at the same table with them just as he sat with them during the conferences. This invitation, however, he declined, and provision was then, at his request, made for serving his meals at a separate table but in the same dining room and at the same hour as the others were served.

The reasons for Banneker's refusal to accept this invitation, however, are not so clear. Various of his biographers have attributed his action on this occasion to what they seemed pleased to term his "native modesty." Judging it at this distance from the time of its occurrence, it is perhaps difficult to understand fully his motive. But if we view it in the light of the consistent wisdom and high-mindedness that seemed to guide his whole life we can hope

²⁸ *Washington Star*, October 15, 1916.

²⁹ *Georgetown Weekly Ledger*, March 12, 1791.

³⁰ Tyson, *Banneker*, p. 37.

that his reasons for the self-imposed coventry on that occasion were sufficient unto himself, and that they fully excluded every element of servility.

Banneker's work with this commission was undertaken while he was still engaged in astronomical investigation, and after his services in Washington were concluded he returned to his home and resumed his work on his almanacs, which regularly appeared until 1802. He was now living alone in the home left him by his parents, and performed for himself nearly all the domestic services required for his health and comfort. Still obliged to rely mainly upon his farm for his livelihood, he tried various expedients with different tenants to rid himself of the necessity for giving so much of his time to the farm. In these efforts he was wholly unsuccessful. He finally decided, therefore, to enter into such an arrangement in the disposition of his effects as would provide him an annuity, relieving himself of all anxiety for his maintenance and at the same time affording him the leisure he wanted for study. This he was enabled to do through a contract with one of the Ellicotts, by the terms of which his friend was to take the title to Banneker's property, making the latter an annual allowance of 12 pounds for a given period of time calculated by Banneker to be the span of years he could reasonably be expected to live. Banneker was to continue to occupy and use the property during his life, after which the possession was to go to Ellicott.³¹ Banneker lived, however, eight years longer than he thought he would, but Ellicott faithfully lived up to this contract. This miscalculation is said to have been the only mistake in mathematics Banneker ever made. With his domestic affairs settled to his satisfaction, and having now the desired leisure to continue his studies, he gave himself up wholly to that object.

His active mind now found time also for occasional diversion to other lines than mathematics. It was about this time that he made the calculations showing that the locust plague was recurrent in cycles of 17 years each. He also

³¹ Tyson, *Banneker*, pp. 70-71.

wrote a dissertation on bees which has been favorably compared with a similar contribution by Pliny on the same subject written nearly 1800 years earlier. Banneker's nature seemed tuned also to the softer notes in the song of life. He loved music, and often, as a relaxation, he would sit beneath a huge chestnut tree near his house and beguile the hours by playing on his flute or violin.³²

The disastrous war waged in 1793 so disturbed Banneker that he devoted much time to the study of the best methods to promote peace. To this end he suggested that the United States Government establish a department in the President's cabinet to be in charge of a Secretary of Peace. He then made a strong appeal to the authorities of his government to take a broad stand based on humanity and justice and in that spirit to formulate a comprehensive plan by which *A Lasting Peace*³³ might be substituted for the wars that were then disturbing the world.

During these years his home was frequently visited by people who sought him because of his intellectual gifts, and who were in no wise abashed by the fact of his racial connection. To them he was merely an honored citizen in the field of achievement.³⁴ "During the whole of his long life," says Benjamin Ellicott, "he lived respectably and much esteemed by all who became acquainted with him, but more especially by those who could fully appreciate his genius and the extent of his acquirements. Although his mode of life was regular and extremely retired,—living alone, having never married, cooking his own victuals and washing his own clothes, and scarcely ever being absent from home,—yet there was nothing misanthropic in his character; for a gentleman who knew him thus speaks of him: 'I recollect him well. He was a brave-looking pleasant man, with something very noble in his appearance.' His mind was evidently much engrossed in his calculations; but he was glad to receive the visits which we often paid him."

³² Tyson, *Banneker*, pp. 35-60.

³³ *Records of the Columbia Historical Society*, XX, pp. 117-119.

³⁴ *The Atlantic Monthly*, XI, p. 84.

Another writes: "When I was a boy I became very much interested in him, as his manners were those of a perfect gentleman: kind, generous, hospitable, humane, dignified, and pleasing, abounding in information on all the various subjects and incidents of the day, very modest and unassuming, and **delighting in society** at his own house. I have seen him frequently. His head was covered with a thick suit of white hair, which gave him a very dignified and venerable appearance. His dress was uniformly of superfine broadcloth, made in the old style of a plain coat, with straight collar and long waistcoat, and a broad-brimmed hat. His color was not jet-black, but decidedly negro. In size and personal appearance, the statue of Franklin at the Library of Philadelphia, as seen from the street, is a perfect likeness of him. Go to his house when you would, either by day or night, there was constantly standing in the middle of the floor a large table covered with books and papers. As he was an eminent mathematician, he was constantly in correspondence with other mathematicians in this country, with whom there was an interchange of questions of difficult solution."³⁵

Mrs. Tyson describes the courtliness of his manner when receiving friendly visits from the ladies of his community, who delighted to call on him in his neat cottage, to have the pleasure of his rare conversation. On these occasions he would sometimes allude to his love of the study of astronomy as quite unsuited to a man of his class.³⁶

In the earlier years of his life Banneker is said to have formed the "social drink" habit, which we can imagine was all the easier for a man of his agreeable manners, in an environment where hospitality was general, and in a day when cordiality usually expressed itself in that way. But to the credit of his strength of mind and will, it is also said that he actually overcame that habit by the mere determination that he would do it, and that on his return from his stay with the commission at Washington he is said to have de-

³⁵ Tyson, *Banneker*, p. 31.

³⁶ *Ibid.*, p. 31.

clared rather proudly that he never partook once of the wines that were so freely offered him.³⁷

Banneker was not a professing Christian and not an adherent of any church, but "he loved the doctrines and mode of worship of the Society of Friends, and was frequently at their meetings." A contemporary says: "We have seen Banneker in Elkridge meeting house, where he always sat on the form nearest the door, his head uncovered. His ample forehead, white hair and reverent deportment gave him a very venerable appearance, as he leaned on the long staff (which he always carried with him) in quiet contemplation."³⁸

There was no blemish in the entire record of his singularly active and useful life. His whole span of years appears to have been spent with a conscience void of offense, and he approached the end with a serenity of mind well befitting the high ideals set before him. Although his body never wandered far from the place of his birth, his mind was permitted to soar through all space and to dwell in the regions of the stars and the planets. We can never know how sorely his finer spirit grieved over the tribulations that beset his blood kinsmen in the days of their bondage in this land of their birth, but we can well believe that in the loftiness of his soul he dreamed the dream of their ultimate release.

As the shadows gathered about him towards the evening of his life he abandoned those pursuits that had brought him merited distinction, and had gained for him the admiration of a host of friends chiefly among people that the world called superior. One beautiful Sabbath afternoon, in the month of October, 1806,³⁹ while quietly resting in the shade of a tree beside his cottage on the brow of a hill that overlooked the Patapsco Valley he seemed to hear the voices that beckoned him to the other world. And as if stirred by some sudden impulse he rose and made an effort to walk

³⁷ *Catholic World*, XVIII, p. 354.

³⁸ Norris's *Memoir*, *Maryland Historical Society Publications*, II, p. 75.

³⁹ *Federal Gazette and Baltimore Daily Advertiser*, October 28, 1806.

once more along the paths that had so often been his quiet retreat in the moments of his deep reflections. He had not gone far, when his strength gave way, and he sank helpless to the ground. He was assisted back to his home by a friendly neighbor, but the noon of his day having fully merged into the evening, the dark shadows of Eternal Night settled over him.

Directly after Banneker's death, in fact, on that very day, his sisters, Minta Black and Mollie Morton, undertook to carry out his wishes with respect to the disposition to be made of his personal effects. Banneker had, a few years before, directed that "all the articles which had been presented to him by George Ellicott, consisting of his books and mathematical instruments, and the table on which he made his calculations should be returned as soon as he should die."⁴⁰ He also requested that "as an acknowledgment of a debt of gratitude for Ellicott's long-continued kindness he should be given a volume of the manuscripts containing all his almanacs, his observations on various subjects, his letter to Thomas Jefferson, and the reply of that statesman." All the rest that he possessed was left to the two sisters. It was due to the faithful execution of his wishes on the very day of his death that his valuable manuscripts were preserved at all. They were all carried to George Ellicott, and this circumstance was the first notice that Ellicott received of the passing away of his friend. "Banneker's funeral took place two days afterward, and while the ceremonies were in progress at his grave, his home took fire and burned so rapidly that nothing could be saved."⁴¹

Some time before his death Banneker gave to one of his sisters the feather bed on which he usually slept, and this she preserved as her only keepsake of him. Years afterwards she had occasion to open the bed and, feeling something hard among the feathers, she discovered that it was a purse of money. This circumstance shows that Banneker

⁴⁰ Norris's *Memoir*, *Maryland Historical Society Publications*, II, p. 64.

⁴¹ *Ibid.*, II, p. 73.

was not "in the evening of his life overshadowed by extreme poverty."⁴²

In an excellent paper read on April 18, 1916, before the Columbia Historical Society of Washington, by Mr. P. Lee Phillips, of the Library of Congress, *Banneker's Almanac* was compared with Benjamin Franklin's *Poor Richard's Almanac*. Mr. Phillips also referred to his efforts in behalf of peace and to the friendship that existed between Banneker and such distinguished men of his time as Washington and Jefferson. He closed his article on Banneker with the broad-minded declaration that "Maryland should in some manner honor the memory of this distinguished citizen, who, notwithstanding the race prejudice of the time, rose to eminence in scientific attainments, the study of which at that early date was almost unknown."⁴³ The recognition of Douglass in Rochester and Boston, Pushkin in Petrograd and Moscow and Dumas in Paris, affords splendid suggestions of what we hope to see of Banneker in Baltimore. It is a sad reflection on the people of this country that practically nothing has been done to honor this distinguished man.

HENRY E. BAKER

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⁴² Tyson, *Banneker*, p. 72.

⁴³ *Records of the Columbia Historical Society*, XX, pp. 119-120.

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